THE CAMBRIDGE STATISTICS DISCUSSION GROUP

Tuesday 7th October 2025 7:15 for 7:45

Large Lecture Theatre,
MRC Cognition and Brain Sciences Unit,
Chaucer Road, Cambridge, CB2 7EF

All models are wrong and yours are useless: making clinical prediction models impactful for patients

Florian Markowetz
Cancer Research UK Cambridge Institute

Abstract: Most published clinical prediction models are never used in clinical practice which leads to a huge gap between academic research and clinical implementation. Here, I propose a checklist to enable academic researchers to be proactive partners in improving clinical practice and to design models in ways that ultimately benefit patients. Over the years I have come to see academic papers not as ends in themselves, but as the beginning of the journey to clinical implementation, and I am frustrated with how little of my own work ever had clinical impact. I argue that you should outline the road to implementation whilst designing your prediction tool by thinking about what medical decisions they are making and how these tools can be used in routine practice. I will illustrate these ideas by discussing AI models from our work to find a minimally invasive alternative to endoscopy and looking at ways of assessing breast cancer survival rates after surgery that can be used in the clinic.

Speaker: Florian Markowetz is a Senior Group Leader at the Cancer Research UK Cambridge Institute. He is a Royal Society Wolfson Research Merit Award holder and received a CRUK Future Leader in Cancer Research prize. He holds degrees in Mathematics (Dipl. math.) and Philosophy (M.A.) from the University of Heidelberg and a Dr. rer. nat. (PhD equivalent) in Computational Biology from Free University Berlin, for which he was awarded an Otto-Hahn Medal by the Max Planck Society. His group at the CRUK Cambridge Institute combines computational work on cancer evolution and image analysis of the tumour tissue with experimental work on understanding key cancer mechanisms like the estrogen receptor.

Annual General Meeting: Florian's talk will be preceded by a brief Annual General Meeting.

Directions (From Central Cambridge) Chaucer Road is off Trumpington Road – if you are heading away from the city centre it is the first right after the junction with Brooklands Avenue. Number 15 is at the end on the left and is a large Victorian House with a more modern extension to its right. The entrance is in the porch located in the middle of the older section on the left as you come in and is accessed by ascending a few steps from the car park. Cars may be parked there. Note due to building work please enter and leave car park via the 'OUT' entrance (the second of the two entrances on the left as you go down Chaucer Road). The outside door will be locked at 7:45.
Arrivals after 7:45pm can gain admittance by contacting the secretary on 07761769436. A map showing the location of the unit is at http://www.mrc-cbu.cam.ac.uk/contact-us.

Provisional Next Meetings:
3rd November – Sam Gilbert (Bennett Institute of Public Policy) on 'Benefits of data openness in a digital world'.
26th November – Riikka Hofmann (Faculty of Education) on '100 years of educational trials – no significant difference?'
3rd February 2026 – Nick Galwey (GlaxoSmithKline) on 'Connecting the False Discovery Rate to shrunk estimates'.
March – Mihaela van der Schaar (Cambridge Centre for AI in Medicine) on 'Revolutionising healthcare: AI-driven breakthroughs in medicine and healthcare delivery'.
April – Daniela DeAngelis (Biostatistics).

Supper: Some members eat regularly in Wetherspoons (St Andrew's Street) before each meeting **at 5-45pm**.All welcome !

Subscriptions: of 1 pound are now due for attending the 2025-2026 session.
Secretary: Peter Watson, MRC Cognition and Brain Sciences Unit, 15 Chaucer Road, Cambridge CB2 7EF; telephone 01223 769479; E-mail peter.watson@mrc-cbu.cam.ac.uk

Slides and .mp3 files of old talks: http://www.mrc-cbu.cam.ac.uk/people/peter.watson/csdg.html

SEE NEXT PAGE for the Annual General Meeting agenda

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Annual General Meeting

The annual general meeting will be followed immediately by Florian's talk 'All models are wrong and yours are useless: making clinical prediction models impactful for patients'.

Agenda:

0. Approval of Minutes of previous A.G.M.
(http://imaging.mrc-cbu.cam.ac.uk/statswiki/csdg/newtalks)

1. Treasurer's Report.

2. Secretary's Report.

3. Election of Chairman, Secretary, Treasurer, plus 3 other members of the Committee.

4. Any Other Business.

Rules for Election:

1. FRANCISE: All paid-up members may vote or stand for office.

2. NOMINATIONS: The offices to be filled are Chairman, Secretary and Treasurer and three other members of the Committee.

An outgoing Chairman will be a member of the Committee ex officio. At the end of each year the entire Committee will stand down, but may stand again for the same office as they are leaving without nomination. To be elected to a different office a candidate must be nominated by one person from the paid-up membership, not including himself. Nominations do not require a seconder to be valid, but do require the consent of the nominee. One person can be nominated for more than one office, but hold only one. If a person is elected to a higher office (according to the ordering given below) he or she automatically ceases to be a candidate for a lower office. A candidate for the post of Chairman, Secretary, Treasurer is automatically a candidate for the Committee if he or she fails to gain election to one of these three posts.

TURN OVER for directions to the Cognition and Brain Sciences Unit and abstract of Florian's talk